

SEQUENCE LISTING

<110> Urry, Dan

<120> Injectable Implants For Tissue Augmentation and Restoration

<130> BERL-020/04US

<150> US 09/258,723

<151> 1999-02-26

<150> US 60/087155

<151> 1998-05-29

<150> US 60/076297

<151> 1998-02-27

<160> 65

<170> PatentIn version 3.0

<210> 1

<211> 180

<212> DNA

<213> Artificial Sequence

<400> 1

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| ttcccgggag gtgtgccggg tggggttcca ggcgggtgtac cgggtgggtt tccgggcggt | 120 |
| gttccgggtg gaggttccggg tggcgtgccg ggcgggtttc caggaagtct tcggatccag | 180 |

<210> 2

<211> 113

<212> DNA

<213> Artificial Sequence

<400> 2

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<210> 3

<211> 33

<212> DNA

<213> Artificial Sequence

<400> 3

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| taggggtacc gggtcgtggt gactctccgg gcg | 33 |
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<210> 4

<211> 33

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<213> Artificial Sequence

<400> 4

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| cgcattccca tggcccagca ccactgagag gcc | 33 |
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[illegible][illegible][illegible]

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[illegible][illegible]

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<400> 13

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1 5 10 15
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35 40 45
Val Pro Gly Val Gly Val Pro Gly Arg Gly Asp Ser Pro Gly Val Gly
50 55 60
Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val
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<210> 14

<211> 148

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<213> Artificial Sequence

<400> 14

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35 40 45
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85 90 95
Ala Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val
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Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly
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Val Gly Val Pro
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<213> Artificial Sequence
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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | 20 | | | | | 25 | | | | | 30 | | |

Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly
35 40 45

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val |
| 50 | | | | | | 55 | | | | | 60 | | | | |

Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro
65 70 75 80

Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly
85 90 95

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val |
| | | | 100 | | | | | 105 | | | | | 110 | | |

| | | | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly |
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| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly |
| 1100 | | | | | | 1105 | | | | | 1110 | | | |
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly |
| 1115 | | | | | | 1120 | | | | | 1125 | | | |
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly |
| 1130 | | | | | | 1135 | | | | | 1140 | | | |
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly |
| 1145 | | | | | | 1150 | | | | | 1155 | | | |
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly |
| 1160 | | | | | | 1165 | | | | | 1170 | | | |
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly |
| 1175 | | | | | | 1180 | | | | | 1185 | | | |
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly |
| 1190 | | | | | | 1195 | | | | | 1200 | | | |
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly |
| 1205 | | | | | | 1210 | | | | | 1215 | | | |
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly |
| 1220 | | | | | | 1225 | | | | | 1230 | | | |
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly |
| 1235 | | | | | | 1240 | | | | | 1245 | | | |
| Val | Pro | Gly | Val | Gly | Val | Pro | | | | | | | | |
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<210> 19
 <211> 5
 <212> PRT
 <213> Artificial Sequence

 <220>
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 <223> the residue at posiiton 4 is modified to have an electroresponsiv
 e side chai

<400> 19

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|-----|-----|-----|-----|-----|
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| 1 | | | | 5 |

<210> 20
 <211> 5
 <212> PRT
 <213> Artificial Sequence

<400> 20

Gly Val Gly Val Pro

1 5

<210> 21
 <211> 166
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 <213> Artificial Sequence

<400> 21

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Gly Gly Ala Pro Gly Gly Ala Pro Gly Gly Ala Pro Gly Gly Ala Pro
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Gly Gly Ala Pro Gly Gly Ala Pro Gly Gly Ala Pro Gly Gly Ala Pro
 35 40 45

Gly Gly Ala Pro Gly Gly Ala Pro Gly Gly Ala Pro Gly Gly Ala Pro
 50 55 60

Gly Gly Ala Pro Gly Gly Ala Pro Gly Gly Ala Pro Gly Gly Ala Pro
 65 70 75 80

Gly Gly Ala Pro Gly Gly Ala Pro Gly Gly Ala Pro Gly Gly Ala Pro
 85 90 95

Gly Gly Ala Pro Gly Gly Ala Pro Gly Gly Ala Pro Gly Gly Ala Pro
 100 105 110

Gly Gly Ala Pro Gly Gly Ala Pro Gly Gly Ala Pro Gly Gly Ala Pro
 115 120 125

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Gly Gly Ala Pro Gly Gly Ala Pro Gly Gly Ala Pro Gly Gly Ala Pro
 145 150 155 160

Gly Arg Gly Asp Ser Pro
 165

<210> 22
 <211> 25
 <212> PRT
 <213> Artificial Sequence

<400> 22

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Val Gly Val Pro Gly Glu Gly Val Pro
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<210> 23
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<400> 23

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<400> 25

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Lys | Gly | Val | Pro | Gly |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Val | Gly | Val | Pro | Gly | Val | Gly | Phe | Pro | Gly | Phe | Gly | Phe | Pro | Gly | Val |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Lys | Gly | Val | Pro | Gly | Val | Gly |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Val | Pro | Gly | Val | Gly | Phe | Pro | Gly | Phe | Gly | Phe | Pro | Gly | Val | Gly | Val |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Pro | Gly | Val | Gly | Val | Pro | Gly | Lys | Gly | Val | Pro | Gly | Val | Gly | Val | Pro |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Gly | Val | Gly | Phe | Pro | Gly | Phe | Gly | Phe | Pro | Gly | Val | Gly | Val | Pro | Gly |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Val | Gly | Val | Pro | Gly | Lys | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val |
| | | | 100 | | | | | 105 | | | | | 110 | | |

Gly Phe Pro Gly Phe Gly Phe Pro Gly Val Gly Val Pro Gly Val Gly
115 120 125

Val Pro Gly Lys Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Phe
130 135 140

Pro Gly Phe Gly Phe Pro Gly Val Gly Val Pro Gly Val Gly Val Pro
145 150 155 160

Gly Lys Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Phe Pro Gly
165 170 175

Phe Gly Phe Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Lys
180 185 190

Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Phe Pro Gly Phe Gly
195 200 205

Phe Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Lys Gly Val
210 215 220

Pro Gly Val Gly Val Pro Gly Val Gly Phe Pro Gly Phe Gly Phe Pro
225 230 235 240

Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Lys Gly Val Pro Gly
245 250 255

Val Gly Val Pro Gly Val Gly Phe Pro Gly Phe Gly Phe Pro Gly Val
260 265 270

Gly Val Pro Gly Val Gly Val Pro Gly Lys Gly Val Pro Gly Val Gly
275 280 285

Val Pro Gly Val Gly Phe Pro Gly Phe Gly Phe Pro Gly Val Gly Val
290 295 300

Pro Gly Val Gly Val Pro Gly Lys Gly Val Pro Gly Val Gly Val Pro
305 310 315 320

Gly Val Gly Phe Pro Gly Phe Gly Phe Pro Gly Val Gly Val Pro Gly
325 330 335

Val Gly Val Pro Gly Lys Gly Val Pro Gly Val Gly Val Pro Gly Val
340 345 350

Gly Phe Pro Gly Phe Gly Phe Pro Gly Val Gly Val Pro Gly Val Gly
355 360 365

Val Pro Gly Lys Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Phe
370 375 380

Pro Gly Phe Gly Phe Pro Gly Val Gly Val Pro Gly Val Gly Val Pro
385 390 395 400

Gly Lys Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Phe Pro Gly
405 410 415

Phe Gly Phe Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Lys
420 425 430

Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Phe Pro Gly Phe Gly

435 440 445

Phe Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Lys Gly Val
450 455 460

Pro Gly Val Gly Val Pro Gly Val Gly Phe Pro Gly Phe Gly Phe Pro
465 470 475 480

Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Lys Gly Val Pro Gly
485 490 495

Val Gly Val Pro Gly Val Gly Phe Pro Gly Phe Gly Phe Pro Gly Val
500 505 510

Gly Val Pro Gly Val Gly Val Pro Gly Lys Gly Val Pro Gly Val Gly
515 520 525

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530 535 540

Pro Gly Val Gly Val Pro Gly Lys Gly Val Pro Gly Val Gly Val Pro
545 550 555 560

Gly Val Gly Phe Pro Gly Phe Gly Phe Pro Gly Val Gly Val Pro Gly
565 570 575

Val Gly Val Pro Gly Lys Gly Val Pro Gly Val Gly Val Pro Gly Val
580 585 590

Gly Phe Pro Gly Phe Gly Phe Pro Gly Val Gly Val Pro Gly Val Gly
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<400> 26
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gtgtgc 66

<210> 27
<211> 66
<212> DNA
<213> Artificial Sequence

<400> 27
ctggatccaa cgcctgggaa tccgaaaccc ggaaagccta caccgggcac accaagccc 60
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<210> 28

<211> 6
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<400> 28

Gly Arg Gly Asp Ser Pro
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<210> 29
 <211> 50
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<400> 29

Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly
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 20 25 30

Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly
 35 40 45

Val Pro
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<210> 30
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<400> 30
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<210> 31
 <211> 36
 <212> DNA
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<400> 31
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<210> 32
 <211> 22
 <212> DNA
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<400> 32
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<210> 33
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<210> 34
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35 40 45
Val Pro Gly Val Gly Val Pro Gly Arg Gly Asp Ser Pro Gly Val Gly
50 55 60
Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val
65 70 75 80
Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro
85 90 95
Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly
100 105 110
Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val
115 120 125
Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly
130 135 140
Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val
145 150 155 160
Pro Gly Val Gly Val Pro Gly Arg Gly Asp Ser Pro Gly Val Gly Val
165 170 175
Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro
180 185 190
Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly
195 200 205
Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val
210 215 220
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225 230 235 240
Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val
245 250 255
Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro
260 265 270

Gly Val Gly Val Pro Gly Arg Gly Asp Ser Pro Gly Val Gly Val Pro
 275 280 285
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 340 345 350
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 370 375 380
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 385 390 395 400
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 Arg Gly Asp Ser Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly
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 995 1000 1005
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 1220 1225 1230

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|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|
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| 1235 | | | | | | 1240 | | | | | 1245 | | | |
| Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val |
| 1250 | | | | | | 1255 | | | | | 1260 | | | |
| Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Arg |
| 1265 | | | | | | 1270 | | | | | 1275 | | | |
| Gly | Asp | Ser | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly |
| 1280 | | | | | | 1285 | | | | | 1290 | | | |
| Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly |
| 1295 | | | | | | 1300 | | | | | 1305 | | | |
| Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly |
| 1310 | | | | | | 1315 | | | | | 1320 | | | |
| Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly |
| 1325 | | | | | | 1330 | | | | | 1335 | | | |
| Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly |
| 1340 | | | | | | 1345 | | | | | 1350 | | | |
| Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly |
| 1355 | | | | | | 1360 | | | | | 1365 | | | |
| Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly |
| 1370 | | | | | | 1375 | | | | | 1380 | | | |
| Val | Gly | Val | Pro | Gly | Arg | Gly | Asp | Ser | Pro | Gly | Val | Gly | Val | Pro |
| 1385 | | | | | | 1390 | | | | | 1395 | | | |
| Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro |
| 1400 | | | | | | 1405 | | | | | 1410 | | | |
| Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro |
| 1415 | | | | | | 1420 | | | | | 1425 | | | |
| Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro |
| 1430 | | | | | | 1435 | | | | | 1440 | | | |
| Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro |
| 1445 | | | | | | 1450 | | | | | 1455 | | | |
| Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro |
| 1460 | | | | | | 1465 | | | | | 1470 | | | |
| Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro |
| 1475 | | | | | | 1480 | | | | | 1485 | | | |
| Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Arg | Gly | Asp | Ser |
| 1490 | | | | | | 1495 | | | | | 1500 | | | |
| Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val |
| 1505 | | | | | | 1510 | | | | | 1515 | | | |
| Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val |
| 1520 | | | | | | 1525 | | | | | 1530 | | | |
| Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val |

Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly
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Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly
1865 1870 1875

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1880 1885 1890

Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly
1895 1900 1905

Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly
1910 1915 1920

Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly
1925 1930 1935

Val Gly Val Pro Gly Arg Gly Asp Ser Pro Gly Val Gly Val Pro
1940 1945 1950

Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro
1955 1960 1965

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1970 1975 1980

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1985 1990 1995

Gly Val Gly Val Pro
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<210> 35
<211> 1085
<212> PRT
<213> Artificial Sequence

<400> 35

Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly
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Lys Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val
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Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Lys Gly
35 40 45

Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val
50 55 60

Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Lys Gly Val Pro
65 70 75 80

Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly
85 90 95

Val Gly Val Pro Gly Val Gly Val Pro Gly Lys Gly Val Pro Gly Val
100 105 110

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | 115 | 120 | 125 |
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Lys | Gly | Val | Pro | Gly | Val | Gly | Val | 130 | 135 | 140 |
| Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | 145 | 150 | 155 |
| Gly | Val | Gly | Val | Pro | Gly | Lys | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | 165 | 170 | 175 |
| Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | 180 | 185 | 190 |
| Gly | Val | Pro | Gly | Lys | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | 195 | 200 | 205 |
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | 210 | 215 | 220 |
| Pro | Gly | Lys | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | 225 | 230 | 235 |
| Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | 245 | 250 | 255 |
| Lys | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | 260 | 265 | 270 |
| Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Lys | Gly | 275 | 280 | 285 |
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | 290 | 295 | 300 |
| Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Lys | Gly | Val | Pro | 305 | 310 | 315 |
| Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | 325 | 330 | 335 |
| Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Lys | Gly | Val | Pro | Gly | Val | 340 | 345 | 350 |
| Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | 355 | 360 | 365 |
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Lys | Gly | Val | Pro | Gly | Val | Gly | Val | 370 | 375 | 380 |
| Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | 385 | 390 | 395 |
| Gly | Val | Gly | Val | Pro | Gly | Lys | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | 405 | 410 | 415 |
| Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | 420 | 425 | 430 |

Protein Data Bank

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|-----------------------------|---------------------|---------------------|---------------------|-------------|
| Gly Val | Pro Gly Lys Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly | Val Gly |
| 435 | | 440 | 445 | |
| Val Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val | Val Gly Val |
| 450 | | 455 | 460 | |
| Pro Gly Lys Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val |
| 465 | | 470 | 475 | 480 |
| Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly |
| | 485 | 490 | | 495 |
| Lys Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val |
| | 500 | 505 | | 510 |
| Gly Val Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Lys Gly | |
| | 515 | 520 | 525 | |
| Val Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val | |
| | 530 | 535 | 540 | |
| Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Lys Gly Val | Pro Gly | |
| 545 | | 550 | 555 | 560 |
| Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly | |
| | 565 | 570 | 575 | |
| Val Gly Val | Pro Gly Val Gly Val | Pro Gly Lys Gly Val | Pro Gly Val | |
| | 580 | 585 | 590 | |
| Gly Val Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly | |
| | 595 | 600 | 605 | |
| Val Pro Gly Val Gly Val | Pro Gly Lys Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val | |
| | 610 | 615 | 620 | |
| Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro |
| 625 | | 630 | 635 | 640 |
| Gly Val Gly Val | Pro Gly Lys Gly Val | Pro Gly Val Gly Val | Pro Gly | |
| | 645 | 650 | 655 | |
| Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val | |
| | 660 | 665 | 670 | |
| Gly Val Pro Gly Lys Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly | |
| | 675 | 680 | 685 | |
| Val Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val | |
| | 690 | 695 | 700 | |
| Pro Gly Lys Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro |
| 705 | | 710 | 715 | 720 |
| Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly | |
| | 725 | 730 | 735 | |
| Lys Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val | |
| | 740 | 745 | 750 | |
| Gly Val Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Lys Gly | | |

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|-------------------------------------|---------------------------------|-----------------------------|
| Val Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val |
| 770 | 775 | 780 |
| Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Lys Gly Val Pro |
| 785 | 790 | 795 800 |
| Gly Val Gly Val Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val Pro Gly |
| 805 | 810 | 815 |
| Val Gly Val Pro Gly Val Gly Val | Pro Gly Lys Gly Val Pro Gly Val | |
| 820 | 825 | 830 |
| Gly Val Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly |
| 835 | 840 | 845 |
| Val Pro Gly Val Gly Val | Pro Gly Lys Gly Val | Pro Gly Val Gly Val |
| 850 | 855 | 860 |
| Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val Pro |
| 865 | 870 | 875 880 |
| Gly Val Gly Val Pro Gly Lys Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly |
| 885 | 890 | 895 |
| Val Gly Val Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val |
| 900 | 905 | 910 |
| Gly Val Pro Gly Lys Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly |
| 915 | 920 | 925 |
| Val Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val |
| 930 | 935 | 940 |
| Pro Gly Lys Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly Val Pro |
| 945 | 950 | 955 960 |
| Gly Val Gly Val Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly |
| 965 | 970 | 975 |
| Lys Gly Val Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val |
| 980 | 985 | 990 |
| Gly Val Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Lys Gly |
| 995 | 1000 | 1005 |
| Val Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly |
| 1010 | 1015 | 1020 |
| Val Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Lys Gly |
| 1025 | 1030 | 1035 |
| Val Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly |
| 1040 | 1045 | 1050 |
| Val Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Lys Gly |
| 1055 | 1060 | 1065 |
| Val Pro Gly Val Gly Val | Pro Gly Val Gly Val | Pro Gly Val Gly |
| 1070 | 1075 | 1080 |

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Val Pro
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<212> PRT
<213> Artificial Sequence

<400> 36

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Val Gly Val Pro Gly Val Gly Phe Pro Gly Phe Gly Phe Pro Gly Val
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Gly Val Pro Gly Val Gly Val Pro Gly Lys Gly Val Pro Gly Val Gly
35 40 45

Val Pro Gly Val Gly Phe Pro Gly Phe Gly Phe Pro Gly Val Gly Val
50 55 60

Pro Gly Val Gly Val Pro Gly Lys Gly Val Pro Gly Val Gly Val Pro
65 70 75 80

Gly Val Gly Phe Pro Gly Phe Gly Phe Pro Gly Val Gly Val Pro Gly
85 90 95

Val Gly Val Pro Gly Lys Gly Val Pro Gly Val Gly Val Pro Gly Val
100 105 110

Gly Phe Pro Gly Phe Gly Phe Pro Gly Val Gly Val Pro Gly Val Gly
115 120 125

Val Pro Gly Lys Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Phe
130 135 140

Pro Gly Phe Gly Phe Pro Gly Val Gly Val Pro Gly Val Gly Val Pro
145 150 155 160

Gly Lys Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Phe Pro Gly
165 170 175

Phe Gly Phe Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Lys
180 185 190

Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Phe Pro Gly Phe Gly
195 200 205

Phe Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Lys Gly Val
210 215 220

Pro Gly Val Gly Val Pro Gly Val Gly Phe Pro Gly Phe Gly Phe Pro
225 230 235 240

Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Lys Gly Val Pro Gly
245 250 255

Val Gly Val Pro Gly Val Gly Phe Pro Gly Phe Gly Phe Pro Gly Val
260 265 270

Protein Data Bank

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Lys | Gly | Val | Pro | Gly | Val | Gly |
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| Val | Pro | Gly | Val | Gly | Phe | Pro | Gly | Phe | Gly | Phe | Pro | Gly | Val | Gly | Val |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Pro | Gly | Val | Gly | Val | Pro | Gly | Lys | Gly | Val | Pro | Gly | Val | Gly | Val | Pro |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Gly | Val | Gly | Phe | Pro | Gly | Phe | Gly | Phe | Pro | Gly | Val | Gly | Val | Pro | Gly |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Val | Gly | Val | Pro | Gly | Lys | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Gly | Phe | Pro | Gly | Phe | Gly | Phe | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly |
| | 355 | | | | | | 360 | | | | | 365 | | | |
| Val | Pro | Gly | Lys | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Phe |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Pro | Gly | Phe | Gly | Phe | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Gly | Lys | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Phe | Pro | Gly |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Phe | Gly | Phe | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Lys |
| | | | 420 | | | | | 425 | | | | | 430 | | |
| Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Phe | Pro | Gly | Phe | Gly |
| | | 435 | | | | | 440 | | | | | 445 | | | |
| Phe | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Lys | Gly | Val |
| | 450 | | | | | 455 | | | | | 460 | | | | |
| Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Phe | Pro | Gly | Phe | Gly | Phe | Pro |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 |
| Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Lys | Gly | Val | Pro | Gly |
| | | | | 485 | | | | | 490 | | | | | 495 | |
| Val | Gly | Val | Pro | Gly | Val | Gly | Phe | Pro | Gly | Phe | Gly | Phe | Pro | Gly | Val |
| | | | 500 | | | | | 505 | | | | | 510 | | |
| Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Lys | Gly | Val | Pro | Gly | Val | Gly |
| | | 515 | | | | | 520 | | | | | 525 | | | |
| Val | Pro | Gly | Val | Gly | Phe | Pro | Gly | Phe | Gly | Phe | Pro | Gly | Val | Gly | Val |
| | 530 | | | | | 535 | | | | | 540 | | | | |
| Pro | Gly | Val | Gly | Val | Pro | Gly | Lys | Gly | Val | Pro | Gly | Val | Gly | Val | Pro |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 |
| Gly | Val | Gly | Phe | Pro | Gly | Phe | Gly | Phe | Pro | Gly | Val | Gly | Val | Pro | Gly |
| | | | | 565 | | | | | 570 | | | | | 575 | |
| Val | Gly | Val | Pro | Gly | Lys | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val |
| | | | 580 | | | | | 585 | | | | | 590 | | |

Gly Phe Pro Gly Phe Gly Phe Pro Gly Val Gly Val Pro Gly Val Gly
595 600 605

Val Pro Gly Lys Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Phe
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Pro Gly Phe Gly Phe Pro Gly Val Gly Val Pro
625 630 635

<210> 37

<211> 782

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<213> Artificial Sequence

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35 40 45

Val Pro Gly Val Gly Val Pro Gly Arg Gly Asp Ser Pro Gly Val Gly
50 55 60

Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val
65 70 75 80

Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro
85 90 95

Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly
100 105 110

Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val
115 120 125

Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly
130 135 140

Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val
145 150 155 160

Pro Gly Val Gly Val Pro Gly Arg Gly Asp Ser Pro Gly Val Gly Val
165 170 175

Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro
180 185 190

Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly
195 200 205

Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val
210 215 220

Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly
225 230 235 240

Protein Data Bank

[illegible]

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| | | | | 245 | | | | | 250 | | | | | 255 | |
| Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro |
| | | | | 260 | | | | | 265 | | | | | 270 | |
| Gly | Val | Gly | Val | Pro | Gly | Arg | Gly | Asp | Ser | Pro | Gly | Val | Gly | Val | Pro |
| | | | | 275 | | | | 280 | | | | | | 285 | |
| Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly |
| | | | | 290 | | | | 295 | | | | | | 300 | |
| Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val |
| | | | | | | 310 | | | | 315 | | | | | 320 |
| Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly |
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| | | | | | | | | 360 | | | | | | 365 | |
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| | | | | | | | | 375 | | | | | | 380 | |
| Val | Gly | Val | Pro | Gly | Arg | Gly | Asp | Ser | Pro | Gly | Val | Gly | Val | Pro | Gly |
| | | | | | | 390 | | | | 395 | | | | | 400 |
| Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val |
| | | | | | | 405 | | | | 410 | | | | | 415 |
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| | | | | | | | | 425 | | | | | | 430 | |
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val |
| | | | | | | | | 440 | | | | | | 445 | |
| Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro |
| | | | | | | | | 455 | | | | | | 460 | |
| Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly |
| | | | | | | | | 470 | | | | | | | 480 |
| Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val |
| | | | | | | | | | | 490 | | | | | 495 |
| Gly | Val | Pro | Gly | Arg | Gly | Asp | Ser | Pro | Gly | Val | Gly | Val | Pro | Gly | Val |
| | | | | | | | | 505 | | | | | | 510 | |
| Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly |
| | | | | | | | | 520 | | | | | | 525 | |
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val |
| | | | | | | | | 535 | | | | | | 540 | |
| Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro |
| | | | | | | | | | | 555 | | | | | 560 |
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| 565 | | | | | | 570 | | | | | | 575 | | | | | |
|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Gly | Val | Pro | Gly | Val | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val |
| | | | 580 | | | | | | 585 | | | | | | 590 | | |
| Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Gly |
| | | 595 | | | | | 600 | | | | | | 605 | | | | |
| Val | Pro | Gly | Arg | Gly | Asp | Ser | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Gly |
| | 610 | | | | | 615 | | | | | | 620 | | | | | |
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Gly | Val |
| 625 | | | | 630 | | | | | | 635 | | | | | | 640 | |
| Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Gly | Val | Pro |
| | | | | 645 | | | | | 650 | | | | | | | 655 | |
| Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly |
| | | | 660 | | | | | | 665 | | | | | | 670 | | |
| Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val |
| | 675 | | | | | | 680 | | | | | | 685 | | | | |
| Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Gly |
| | 690 | | | | | | 695 | | | | | | 700 | | | | |
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Gly | Val |
| 705 | | | | 710 | | | | | | 715 | | | | | | 720 | |
| Pro | Gly | Arg | Gly | Asp | Ser | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Gly | Val |
| | | | 725 | | | | | | 730 | | | | | | | 735 | |
| Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Gly | Val | Pro |
| | | | 740 | | | | | | 745 | | | | | | 750 | | |
| Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly |
| | 755 | | | | | | 760 | | | | | | 765 | | | | |
| Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val |
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| <210> 38 | | | | | | | | | | | | | | | | | |
| <211> 745 | | | | | | | | | | | | | | | | | |
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| <213> Artificial Sequence | | | | | | | | | | | | | | | | | |
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| Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val |
| | | | 20 | | | | | 25 | | | | | 30 | | | | |
| Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Gly |
| | | 35 | | | | | 40 | | | | | 45 | | | | | |
| Val | Pro | Gly | Val | Gly | Val | Ala | Pro | Gly | Val | Gly | Val | Ala | Pro | Gly | Val | Gly | Val |
| | 50 | | | | | 55 | | | | | | 60 | | | | | |
| Gly | Val | Ala | Pro | Gly | Val | Gly | Val | Ala | Pro | Gly | Val | Gly | Val | Ala | Pro | Gly | Val |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly |
| | | | 420 | | | | | 425 | | | | | 430 | | |
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val |
| | | 435 | | | | | 440 | | | | | 445 | | | |
| Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro |
| | 450 | | | | | 455 | | | | | 460 | | | | |
| Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 |
| Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val |
| | | | | 485 | | | | | 490 | | | | | 495 | |
| Gly | Val | Ala | Pro | Gly | Val | Gly | Val | Ala | Pro | Gly | Val | Gly | Val | Ala | Pro |
| | | | 500 | | | | | 505 | | | | | 510 | | |
| Gly | Val | Gly | Val | Ala | Pro | Gly | Val | Gly | Val | Ala | Pro | Gly | Val | Gly | Val |
| | | 515 | | | | | 520 | | | | | 525 | | | |
| Ala | Pro | Gly | Val | Gly | Val | Ala | Pro | Gly | Val | Gly | Val | Ala | Pro | Gly | Val |
| | 530 | | | | | 535 | | | | | 540 | | | | |
| Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 |
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val |
| | | | | 565 | | | | | 570 | | | | | 575 | |
| Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro |
| | | | 580 | | | | | 585 | | | | | 590 | | |
| Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly |
| | | 595 | | | | | 600 | | | | | 605 | | | |
| Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val |
| | 610 | | | | | 615 | | | | | 620 | | | | |
| Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly |
| 625 | | | | | 630 | | | | | 635 | | | | | 640 |
| Val | Pro | Gly | Val | Gly | Val | Ala | Pro | Gly | Val | Gly | Val | Ala | Pro | Gly | Val |
| | | | | 645 | | | | | 650 | | | | | 655 | |
| Gly | Val | Ala | Pro | Gly | Val | Gly | Val | Ala | Pro | Gly | Val | Gly | Val | Ala | Pro |
| | | | 660 | | | | | 665 | | | | | 670 | | |
| Gly | Val | Gly | Val | Ala | Pro | Gly | Val | Gly | Val | Ala | Pro | Gly | Val | Gly | Val |
| | | 675 | | | | | 680 | | | | | 685 | | | |
| Ala | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val |
| | 690 | | | | | 695 | | | | | 700 | | | | |
| Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro |
| 705 | | | | | 710 | | | | | 715 | | | | | 720 |

Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly
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Val Gly Val Pro Gly Val Gly Val Pro
740 745

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<211> 1085
<212> PRT
<213> Artificial Sequence

<400> 39

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Glu Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val
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Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Glu Gly
35 40 45

Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val
50 55 60

Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Glu Gly Val Pro
65 70 75 80

Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly
85 90 95

Val Gly Val Pro Gly Val Gly Val Pro Gly Glu Gly Val Pro Gly Val
100 105 110

Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly
115 120 125

Val Pro Gly Val Gly Val Pro Gly Glu Gly Val Pro Gly Val Gly Val
130 135 140

Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro
145 150 155 160

Gly Val Gly Val Pro Gly Glu Gly Val Pro Gly Val Gly Val Pro Gly
165 170 175

Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val
180 185 190

Gly Val Pro Gly Glu Gly Val Pro Gly Val Gly Val Pro Gly Val Gly
195 200 205

Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val
210 215 220

Pro Gly Glu Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro
225 230 235 240

Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly
245 250 255

1085 = 4000

| 580 | | | | | | 585 | | | | | | 590 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | | |
| | | 595 | | | | | 600 | | | | | 605 | | | | | |
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Glu | Gly | Val | Pro | Gly | Val | Gly | Val | | |
| | 610 | | | | | | 615 | | | | | 620 | | | | | |
| Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | | |
| 625 | | | | | 630 | | | | | 635 | | | | | 640 | | |
| Gly | Val | Gly | Val | Pro | Gly | Glu | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | | |
| | | | | 645 | | | | | 650 | | | | | 655 | | | |
| Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | | |
| | | | 660 | | | | | 665 | | | | | 670 | | | | |
| Gly | Val | Pro | Gly | Glu | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | | |
| | | 675 | | | | | 680 | | | | | 685 | | | | | |
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | | |
| | 690 | | | | | | 695 | | | | | 700 | | | | | |
| Pro | Gly | Glu | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | | |
| 705 | | | | | 710 | | | | | 715 | | | | | 720 | | |
| Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | | |
| | | | | 725 | | | | | 730 | | | | | 735 | | | |
| Glu | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | | |
| | | | 740 | | | | | 745 | | | | | 750 | | | | |
| Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Glu | Gly | | |
| | | 755 | | | | | 760 | | | | | 765 | | | | | |
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | | |
| | 770 | | | | | | 775 | | | | | 780 | | | | | |
| Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Glu | Gly | Val | Pro | | |
| 785 | | | | | 790 | | | | | 795 | | | | | 800 | | |
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| Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Glu | Gly | Val | Pro | Gly | Val | | |
| | | | 820 | | | | | 825 | | | | | 830 | | | | |
| Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | | |
| | | 835 | | | | | 840 | | | | | 845 | | | | | |
| Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Glu | Gly | Val | Pro | Gly | Val | Gly | Val | | |
| | 850 | | | | | | 855 | | | | | 860 | | | | | |
| Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | Gly | Val | Gly | Val | Pro | | |
| 865 | | | | | 870 | | | | | 875 | | | | | 880 | | |
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Gly Val Pro Gly Glu Gly Val Pro Gly Val Gly Val Pro Gly Val Gly
915 920 925

Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val
930 935 940

Pro Gly Glu Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro
945 950 955 960

Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly
965 970 975

Glu Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val
980 985 990

Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Glu Gly
995 1000 1005

Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly
1010 1015 1020

Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Glu Gly
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Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly
1040 1045 1050

Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Glu Gly
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Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly
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Val Pro
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<211> 605
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<213> Artificial Sequence

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Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val
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Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly
35 40 45

Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val
50 55 60

Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro
65 70 75 80

Gly Val Gly Val Pro Gly Val Gly Val Pro Gly Val Gly Val Pro Gly
85 90 95

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Val Gly Val | Pro Gly Val | Gly Val | Gly Val | Pro Gly Val | Gly Val | Pro Gly Val |
| | 100 | | | 105 | | 110 |
| Gly Val Pro | Gly Val Gly | Val Pro Gly | Val Gly Val | Pro Gly Val | Gly Val Pro | Gly Val Gly |
| | 115 | | | 120 | | 125 |
| Val Pro Gly | Val Gly Val | Pro Gly Val | Gly Val Pro | Gly Val Gly | Val Gly Val | |
| | 130 | | | 135 | | 140 |
| Pro Gly Val | Gly Val Pro | Gly Val Gly | Val Pro Gly | Val Gly Val | Pro Gly Val | Pro Gly |
| 145 | | 150 | | 155 | | 160 |
| Gly Val Gly | Val Pro Gly | Val Gly Val | Pro Gly Val | Gly Val Pro | Gly Val Pro | Gly |
| | 165 | | | 170 | | 175 |
| Val Gly Val | Pro Gly Val | Gly Val Pro | Gly Val Gly | Val Pro Gly | Val Gly Val | |
| | 180 | | | 185 | | 190 |
| Gly Val Pro | Gly Val Gly | Val Pro Gly | Val Gly Val | Pro Gly Val | Gly Val Pro | Gly Val Gly |
| | 195 | | | 200 | | 205 |
| Val Pro Gly | Val Gly Val | Pro Gly Val | Gly Val Pro | Gly Val Gly | Val Gly Val | |
| | 210 | | | 215 | | 220 |
| Pro Gly Val | Gly Val Pro | Gly Val Gly | Val Pro Gly | Val Gly Val | Pro Gly Val | Pro Gly |
| 225 | | 230 | | 235 | | 240 |
| Gly Val Gly | Val Pro Gly | Val Gly Val | Pro Gly Val | Gly Val Pro | Gly Val Pro | Gly |
| | 245 | | | 250 | | 255 |
| Val Gly Val | Pro Gly Val | Gly Val Pro | Gly Val Gly | Val Pro Gly | Val Gly Val | |
| | 260 | | | 265 | | 270 |
| Gly Val Pro | Gly Val Gly | Val Pro Gly | Val Gly Val | Pro Gly Val | Gly Val Pro | Gly Val Gly |
| | 275 | | | 280 | | 285 |
| Val Pro Gly | Val Gly Val | Pro Gly Val | Gly Val Pro | Gly Val Gly | Val Gly Val | |
| | 290 | | | 295 | | 300 |
| Pro Gly Val | Gly Val Pro | Gly Val Gly | Val Pro Gly | Val Gly Val | Pro Gly Val | Pro Gly |
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| Gly Val Gly | Val Pro Gly | Val Gly Val | Pro Gly Val | Gly Val Pro | Gly Val Pro | Gly |
| | 325 | | | 330 | | 335 |
| Val Gly Val | Pro Gly Val | Gly Val Pro | Gly Val Gly | Val Pro Gly | Val Gly Val | |
| | 340 | | | 345 | | 350 |
| Gly Val Pro | Gly Val Gly | Val Pro Gly | Val Gly Val | Pro Gly Val | Gly Val Pro | Gly Val Gly |
| | 355 | | | 360 | | 365 |
| Val Pro Gly | Val Gly Val | Pro Gly Val | Gly Val Pro | Gly Val Gly | Val Gly Val | |
| | 370 | | | 375 | | 380 |
| Pro Gly Val | Gly Val Pro | Gly Val Gly | Val Pro Gly | Val Gly Val | Pro Gly Val | Pro Gly |
| 385 | | 390 | | 395 | | 400 |
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